

SEALABLE CONTAINER LID

The present invention is directed generally to a container lid and specifically to a sealable container lid including a mechanism for securely holding tools such as painting and kitchen tools within the container when the lid is in place on the container.

BACKGROUND OF INVENTION

Containers for storing paint, food, and other substances have been in use for many years, and most such containers generally have lids that keep the contents from spilling out.

Often containers need to be watertight or airtight or must be sealed to keep out contaminants, but such sealed containers are often difficult to open and close, and once the seal is broken, are not resealable and require tools to be opened or closed. A lid for a paint container, for example, is necessary to keep the paint from drying out. When not in use painting tools such as brushes and rollers must be paint-free in order to prevent the paint from drying in the brush. Many times painters must leave a painting job partially done, whether for a lunch break or an end of day work stoppage or other reason. Under these circumstances, the painter must cover the paint container and clean the painting tools so that they do not dry out and become unusable.

Covering and cleaning paint containers and tools is time consuming and potentially messy procedure. Some painters have tried to overcome these problems by covering their brushes with plastic wrap or the like, however this procedure tends to be messy and does not always insure that the tools are completely covered, in which case they may dry out. Some

painters store their brushes in a jar of solvent or water, in the case of water-based paints. This technique can cause the bristles to bend and become permanently deformed.

Paint container lids are also problematic in that when a can or bucket is closed while paint is in lid receiving rim of the can or bucket, the lid can become stuck to the point that it takes great effort to remove it. Even if there is no paint in the receiving rim, a tool such as a screwdriver is needed to pry open the lid. This process is time consuming and requires the user to have a screwdriver or other lever tool handy.

Finally, a person using traditional sealed containers can has no way to lock the lid of the can so that unauthorized persons can not easily get into the paint or other items that may be stored inside the container.

SUMMARY OF INVENTION

The present invention is directed to a container lid that is easily sealed to prevent air and other environmental agents from infiltrating the covered container. The lid includes a base and lip, and a strap surrounding the lip that secures the position of the lid and prevents air from seeping into the container. The base of the lid can be a solid, smooth surface, or it can be configured with special features such as suction vents and pour spouts.

A further aspect of the invention is a base configuration including a hatch and slots for receiving and holding tools such as painting tools such as brushes and rollers, kitchen utensils such as spoons, or measuring utensils such as measuring cups or spoons suspended from the lid into the container. The hatch includes features including a hatch cover, gasket, and hinge cover that prevent the passage of air into the container that when paired with the easily sealed

lid on the container prevents air, pests, allergens, and other particles from infiltrating the contents of the container.

BRIEF DESCRIPTION OF DRAWINGS

5 Figure 1A is a schematic view of the lid with sealing mechanism.

Figure 1B is a schematic view of the strap with a toggle latch.

Figure 2 is a schematic view of the sealed lid having a suction vent and pressure release valve.

Figure 3 is a schematic view of the sealed lid having a pour spout.

10 Figure 4 is a schematic view of the lid showing the base having a hatch with slots and a hinge on the periphery.

Figure 5 is a schematic view of the lid showing a paint roller suspended in a slot.

Figure 6 is a schematic view of the hatch cover that coordinates with the hinge of Figure 4 to cover the hatch of Figure 4.

Figure 7 is a schematic view of the gasket that fits under the slotted side of the lid of Figure 4.

15 Figure 8 is a schematic view of the hinge cover.

Figure 9 is a schematic view of the lid in the unsealed lip configuration with a buckle fastener.

DETAILED DESCRIPTION OF INVENTION

20 The lid of the present invention can be attached to any container having a size and shape corresponding to the lid. For the purposes of the present description, the lid is shown as a circular cover for a cylindrical container, but the novel features described herein can correspond to a lid of any reasonable size and shape. In Figure 1A, lid 10 includes a base 11, which covers the container opening, and a lip 12, which envelops the container rim when the lid is secured in

place on the container. The lip 12 can be a sealed lip or an unsealed lip. A sealed lip configuration initially fits securely around the rim of the container to form a seal thereby preventing air from seeping through the lid, while an unsealed lip configuration simply fits loosely over the perimeter of the rim of the container. Lid 10 is preferably constructed of rigid material such as molded propylene while lip 12 is preferably constructed of resilient plastic material such as a vinyl or buna-N material; however, the preferences for material set forth herein do not limit the scope of the invention. Other suitable materials could be used by those skilled in the art. Lip 12 is preferably about one sixteenth of an inch thick and two inches in height, though the exact dimensions are not critical to the invention. The material used for lip 12 must resist migration of air from the outside environment to the inside of the container, and should preferably be resilient and easy to clean.

In order to further secure lid 10 to the container and to prevent the infiltration of air into the container, a flexible strap 21 having two ends 22a and 22b as shown in Figure 1B surrounds lip 12 of Figure 1A. Strap 21 is made of a flexible material such as nylon or pliable metal and terminates at each end with a fastening mechanism 23. Any fastening assembly known in the art can be used so that when the fastening mechanism 23 is in a locked position, strap 21 is pulled tightly around lip 12 into a cinched configuration. If lip 12 is an unsealed configuration, strap 21 is attached to base 10 and fits around lip 12. Upon closing of the fastening mechanism of strap 21, lip 12 compresses tightly around container. In a preferred embodiment, a lining lines the side of lip 12 that engages the container rim to form a more secure seal when compressed. If lip 12 is a sealed configuration, strap 21 is held onto lip 12 by a holding mechanism 25 which can include a plurality of loops 25 attached to lip 12, a tube attached to lip 12, or lip 12 itself. Strap 21 is inserted through said holding mechanism 25 thereby suspending the strap from lip 12

when the strap is not in a closed configuration. In the preferred embodiment, wherein lip 12 serves as the holding mechanism, lip 12 is a flexible, hollow nylon-type material, and strap 21 is inserted into the hollow area of lip 12. When strap 21 is tightened by fastening assembly 23, the lip 12 is drawn under the rim or tightly against the side of the container thereby creating a water-tight seal. In a preferred embodiment, a toggle latch is used as the fastening assembly, however hook and loop fasteners or buckles are also effective. A hasp 24 can protrude from strap 21 thereby allowing a lock to be inserted.

Base 11 of lid 10 can be a solid surface or can be configured to have special features. As shown in Figure 2, base 11 can include a suction vent 13 and a pressure release valve 14.

Suction vent 13 allows air to be removed from the container after the lid is in place thereby creating a vacuum-type environment inside the container. Pressure release valve 14 releases the vacuum created by the suction vent. As shown in Figure 3, base 11 can also include an opening 15 for receiving a pour spout 16. When the contents of the container need to be poured out, the pour spout 16 is inserted into opening 16 and when the pour spout is not needed, the opening 15 is covered with a cap. In order to reduce splashes when using pour spout 16, base 11 also includes an air vent 17. The lid of the present invention can be used to securely cover and seal a wide variety of containers, including but not limited to food storage containers and paint containers.

In a preferred embodiment, lid 10 is configured with a hatch to hold tools such as paintbrushes or rollers suspended from lid 10 within a sealed container. Other tools that could be suspended from the lid include kitchen utensils and measuring utensils. For simplicity of description, painting tools will be used as the primary example for describing the invention. The

present invention is not limited to the tools described herein, but could be used to suspend any tool useful to one in the relevant art.

As shown in Figure 4, within base 11 is a hatch 30 providing access into the covered container. Hatch 30 is preferably rectangular in shape having two parallel sides 31a and 31b and two parallel ends 32a and 32b. The periphery of side 31a includes at least one slot 33 for receiving the handle of a paint tool as shown in Figure 5. Figure 7 shows the preferred configuration of three slots 33, 34a, and 34b along the periphery of side 31a, which allows three tools to be suspended simultaneously from lid 10. Slots can vary depending on the intended use of the lid and there can be a variety of slots within one configuration. For example, slot 33 for receiving paint rollers is slightly longer and narrower than slots 34a and 34b for receiving paint brushes as illustrated in Figure 7. The long, narrow slot better accommodates a paint roller handle while the short, wide slots better accommodate paintbrush handles. To hang a roller or brush in a slot, a painter simply lowers the roller or brush into the container through hatch 30 of lid 10 and then slides the handle into a slot.

The periphery of side 31b includes a hinge 35, which receives hatch cover 40 depicted in Figure 6. Preferably, hinge cover 43, shown in Figure 8, is attached over hinge 35 when hatch cover 40 is in the closed position to secure hatch cover 40 within hinge 35; however, a hinge assembly having a unitary hinge and cover could also be used. Hatch cover 40 is configured to securely cover and seal the entirety of hatch 30 when in the closed position. Accordingly, hatch cover 40 shown in Figure 6 is rectangular in shape to correspond to hatch 30 shown in Figure 4. Hatch cover 40 includes fastening mechanisms 44 that coordinate with fastening mechanisms 36 located on the periphery of side 31a as shown in Figure 6, thereby securing hatch cover 40 in a

closed position. Hinge cover 43 and hatch cover 40 can easily be removed from lid 10 allowing all moving parts to be cleaned to remove paint build up, soil, etc.

When in the closed position, hatch cover 40 does not cover slots 33, 34a, and 34b in order to accommodate tool handles extending up from said lid. In order to prevent air from entering the covered container and ruining or contaminating the contents and the tools, a gasket 41 is attached to the underside of lid 10 extending from the periphery of side 31a outward toward the lip 12 of lid 10 and away from hatch 30. The gasket 41 can be attached to the lid using any suitable adhesive known in the art. As shown in Figure 7, gasket 41 includes at least one narrow slit 42. The number of slits a gasket contains corresponds directly to number of slots in the periphery of side 31a. Gasket 41 shown in Figure 7 contains three slits 42 corresponding to slots 33, 34a, and 34b of Figure 7. Gasket 41 is flexible so as to allow insertion of a tool handle into a slot and corresponding slit and envelope the handle once inserted thereby keeping air out of the covered container. When a handle is not inserted into a slot, slit 42 of gasket 41 remains in a closed configuration to keep air out.

The variety of lids described herein can be used independently to cover a container or in conjunction with one another to cover a single container for a single use. For example, a paint container can fitted with the suction vent/pressure release lid while being stored, fitted with the pouring lid during a project, and fitted with the paint tool storage lid for temporary storage during a project. It is understood that various modifications may be made in the construction of the invention set forth above without departing form the spirit of the invention. Specific examples set forth in the description are not intended to limit the scope of the invention.